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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,676	01/15/2004	Kenny Randolph Parker	80002/US02	6075
7590 Steven A. Owen Eastman Chemical Company P.O. Box 511 Kingsport, TN 37662-5075			EXAMINER OH, TAYLOR V	
			ART UNIT 1625	PAPER NUMBER
			MAIL DATE 05/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/758,676	PARKER ET AL.	
	Examiner	Art Unit	
	Taylor Victor Oh	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/07 & 10/06</u> | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1625

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

The Status of Claims

Claims 1-22 are pending.

Claims 1-22 are rejected.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1625

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katzschnann et al (U.S. 3,513,193).

Katzschnann et al teaches a process of producing terephthalic acid in the followings (see col. 1, lines 13-19):

Terephthalic acid of high quality is isolated from the oxidation products obtained by the air oxidation of a mixture of p-xylene and an excess of p-toluic acid methyl ester by heating said oxidation products, in the substantial absence of acetic acid, to a temperature of about 210° to 280° C., followed by a separation of the terephthalic acid from the reaction mixture.

The oxidation of p-xylene in the liquid phase with oxygen or air at elevated temperatures in the presence of soluble catalysts gives, as a practical matter, only p-toluic acid as the end product. Correspondingly, the oxidation of p-xylene in acetic acid and in the presence of soluble catalysts and so-called initiators, such as bromine compounds, for example, yields predominantly terephthalic acid in addition to p-toluic acid. However, strict requirements in properties must be satisfied by the material of the vessel or container employed when using, for example, acetic acid and bromine compounds. Thus, temperatures around 200° C. and pressures around 20 to 30 atmospheres are necessary in order to obtain the terephthalic acid. And, in order to attain a technically utilizable terephthalic acid, additional purification steps are required.

(see col. 1

,lines 39-54).

The separation of the terephthalic acid from the oxidation product, the solution or the suspension is effected by decanting, filtering or centrifuging the same while hot. Quite suitable therefor is a so-called "Seitz filter." Depending upon the particular work-up method and conditions employed, scaling centrifuges equipped with a washing device may also be advantageously employed.

(see col. 3, lines 69-75).

The instant invention, however, differs from Scott et al in that the multiple stage counter displacement washing with water is unspecified; the drying zone evaporates at least 10 % of volatiles in the wet carboxylic acid cake.

With respect to the evaporation of at least 10 % of volatiles in the wet carboxylic acid cake in the drying zone, the prior art is silent. However, the prior art does undergo

Art Unit: 1625

the drying process of the wet carboxylic acid cake in the drying zone without disclosing the amount of the volatiles during the evaporation. Moreover, the limitation with a process with respect to pH and ,time, and concentration does not impart patentability to a process when such values are those which would be determined by one of ordinary skill in the art in achieving optimum operation of the process. Concentration is well-understood by those of ordinary skill in the art to be a result-effective variable, especially when attempting to control selectivity of chemical process. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to optimize the reaction process by using the centrifuge with the specific types. This is because the skilled artisan in the art would expect the reaction process to be facilitated by employing such centrifuges.

Concerning the unspecified multiple stage counter displacement washing with water, the prior art doe mention that depending on the particular work-up method, and conditions employed, scaling centrifuges equipped with a washing device may be advantageously employed (see col. 3, lines 72-75).

Katzschmann et al teaches does teach the process of producing terephthalic acid by oxidation of para xylene in the reactor in the presence of acetic acid solvent containing cobalt and bromine and further purifying the resultant slurry of the terephthalic acid by a filtration and/or a centrifuge process. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to use scaling centrifuges

Art Unit: 1625

equipped with a washing device in the Katzschmann et al process for the purpose of obtaining the purified terephthalic acid acceptable for the manufacture of fibers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie can be reached on 571-272-0670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


TAYLOR VICTOR OH
PRIMARY EXAMINER

4/27/07